

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No.: 10/759,281

REMARKS

Claims 10-12 including withdrawn claims 11 and 12 have been canceled. Applicants reserve the right to file a continuation and/or divisional application directed to the canceled subject matter.

The amendment to claim 1 finds support, for example, at page 12, lines 7-22 of the specification.

Review and reconsideration on the merits are requested.

Claims 1, 3 and 10 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 1,701,401 to Blackmore.

Claims 2, 5 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Blackmore in view of Fischer et al. (CA 645083).

Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Blackmore in view of U.S. Patent No. 1,726,264 to Hamilton.

Claims 7-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Blackmore.

Each of the rejections relies on Blackmore alone, or on Blackmore as a primary reference in combination with Fischer et al or Hamilton.

The Examiner considered Blackmore as meeting the terms of the rejected claims, including a method of making a metallic shell from a metal pipe by subjecting the blank to a deformation process, the metallic shell having a multi-step through hole including a large diameter hole section (Fig. 3, top 15), an intermediate diameter hole section (Fig. 3, middle 11)

smaller in diameter than the large diameter hole section and a small diameter hole section (Fig. 3, bottom) smaller in diameter than the intermediate hole section.

Applicants traverse, and respectfully request the Examiner to reconsider in view of the amendment to the claims and the following remarks.

A characteristic feature of the present invention, as claimed in amended claim 1, resides in that the deformation process is extrusion, and an inner diameter of the pipe is equal to a diameter of one of the large diameter hole section (8L), the intermediate diameter hole section (8M) and the small diameter hole section (8S). See Fig. 3B.

Significantly, this feature is advantageous in extrusion of a metallic shell for a spark plug of small-size and long reach as described at pages 1-2 of the specification. That is, the above feature can overcome a problem inherent in the prior art, i.e., short tool life in forming a metallic shell for a spark plug of small-size and long reach, and difficulty in obtaining a desired straightness of a multi-stepped hole of the metallic shell, etc.

Blackmore discloses nothing about producing a metallic shell by extrusion (i.e., in Blackmore, the shell is flared at one end to have an expanded portion 11) and says nothing about making an inner diameter of a metal pipe, to be processed by extrusion, equal to a diameter of one of the large diameter hole section (8L), the intermediate diameter hole section (8M) and the small diameter hole section (8S).

Thus, because Blackmore fails to disclose one or more elements of claim 1, it is respectfully submitted that the present claims are not anticipated by Blackmore.

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Further, none of the other references cited teaches or suggests forming a metallic shell using a metallic pipe as a starting material and by extrusion. Accordingly, there is no combination of Blackmore and any of the cited references which teaches or suggests the above-described feature of the present invention.

Thus, it is respectfully submitted that the present claims are patentable over Blackmore considered alone or in combination with any of Fischer et al or Hamilton, and withdrawal of the foregoing rejections is respectfully requested.

Withdrawal of all rejections and allowance of claims 1-9 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

Respectfully submitted,



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